AMSAT News Service Weekly Bulletins
Issue: ANS-023
Date: 2011-01-23
Sources: amsat-ans-2011-ans-023-weekly.txt

AMSAT NEWS SERVICE
ANS-023

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

In this edition:

* ARISSat-1 Loaded Aboard Progress-41P for Launch on January 28
* AO-51 Power Management Update
* NanoSail-D Feared Lost Now Active - Amateur Radio Reports Requested
* Marshall Amateur Radio Club Confirms NanoSail-D Beacon Active
* January AMSAT India Newsletter - CubeSat Transponder Announced
* ESA Astronaut Paolo Nespoli Speaks with Italian Youth via ARISS
* Last Call: OSCAR SKN Best Fist Nominations Are Due
* Satellite Shorts From All Over
* Next Winners From PayPal Widget Announced
* HI0RCD Special Events Station Plans AO-51 Operation
* Donation to AMSAT via Required Minimum Distribution Option

SB SAT @ AMSAT $ANS-023.01
ARISSat-1 Loaded Aboard Progress-41P for Launch on January 28

AMSAT News Service Bulletin 023.01
>From AMSAT HQ SILVER SPRING, MD.
January 23, 2011
To All RADIO AMATEURS
BID: $ANS-023.01

The ARISSat-1 space craft is mounted in the Progress vehicle at Baikonur and the hatch sealed. Progress 41P is scheduled to lift off next Friday, 28 January 2011. Due to the launch of STS-133, the EVA to deploy ARISSat-1 has been moved up to 16 February 2011.

The NASA Phase 3 Safety Review for ARISSat-1 was held Thursday morning, 19 Jan 2011 in Houston. There were three items that did not have complete paperwork; Energia and the US teams are working to clear this up by early next week.

A NASA press release describes the plans for ARISSat-1 in an article about planned Russian EVAs from the ISS:
http://tinyurl.com/6kceotn (nasa.gov)

Bob, N4HY reports that NASA TV (http://www.nasa.gov/ntv) has run a program featuring ARISSat-1. Watch for repeat playback.

[ANS thanks ARISSat-1 Project Manager Gould Smith, WA4SXM, and NASA for the above information]

/EX

SB SAT @ AMSAT $ANS-023.02
AO-51 Power Management Update

AMSAT News Service Bulletin 023.02
>From AMSAT HQ SILVER SPRING, MD.
January 23, 2011
To All RADIO AMATEURS
BID: $ANS-023.02

AO-51 Control Operator, Mark Hammond, N8MH reported this week, "The satellite continues to be in good operating condition thanks to good power management."

The Control Team continues to make adjustments and refinements in the specific settings. While AO-51 is in the sun its downlink power output remains strong at around 1.3 W output. The transmitters are OFF while in eclipse.

The current schedule is planned to continue through the end of February 2011, when the satellite will return to full sunlight again. The current AO-51 operating mode is:

Single FM Repeater:
Uplink: 145.920 MHz FM
Downlink: 435.300 MHz FM

The AO-51 Command Team requests that users continue to post their observations of AO-51's operating condition on the Live OSCAR Satellite Status Page: http://oscar.dcarr.org/index.php.

Keep up to date with the latest Command Team and Operations Group AO-51 News at: http://www.amsat.org/amsat-new/echo/CTNews.php

[ANS thanks Mark, N8MH, for the above information]

/EX

SB SAT @ AMSAT $ANS-023.03
NanoSail-D Feared Lost Now Active - Amateur Radio Reports Requested

AMSAT News Service Bulletin 023.03
>From AMSAT HQ SILVER SPRING, MD.
January 23, 2011
To All RADIO AMATEURS
BID: $ANS-023.03

[Editor note: The NanoSail-D satellite launched with the NASA FASTSAT mission from Kodiak. It had appeared to not have been ejected and subsequently not activated. This week NASA said that telemetry from FASTSAT now indicated that NanoSail-D was now active and issued the following press release.]

NANOSAIL-D EJECTS; NASA SEEKS AMATUER RADIO OPERATORS' AID TO LISTEN FOR BEACON SIGNAL

HUNTSVILLE, Ala. - Wednesday, Jan. 19 at 11:30 a.m. EST, engineers at Marshall Space Flight Center in Huntsville, Ala., confirmed that the NanoSail-D nanosatellite ejected from Fast Affordable Scientific and Technology Satellite, FASTSAT. The ejection event occurred spontaneously and was identified this morning when engineers at the center analyzed onboard FASTSAT telemetry. The ejection of NanoSail-D also has been confirmed by ground-based satellite tracking assets.

Amateur ham operators are asked to listen for the signal to verify NanoSail-D is operating. This information should be sent to the NanoSail-D dashboard at: http://nanosaild.engr.scu.edu/dashboard.htm. The NanoSail-D beacon signal can be found at 437.270 MHz.

The NanoSail-D science team is hopeful the nanosatellite is healthy and can complete its solar sail mission. After ejection, a timer within NanoSail-D begins a three-day countdown as the satellite orbits the Earth. Once the timer reaches zero, four booms will quickly deploy and the NanoSail-D sail will start to unfold to a 100-square-foot polymer sail. Within five seconds the sail fully unfurls.

"This is great news for our team. We're anxious to hear the beacon which tells us that NanoSail-D is healthy and operating as planned", said Dean Alhorn, NanoSail-D principal investigator and aerospace engineer at the Marshall Center. "The science team is hopeful to see that NanoSail-D is operational and will be able to unfurl its solar sail."

On December 6, 2010, NASA triggered the planned ejection of NanoSail-D from FASTSAT. At that time, the team confirmed that the door successfully opened and data indicated a successful ejection. Upon further analysis, no evidence of NanoSail-D was identified in low-Earth orbit, leading the team to believe NanoSail-D remained inside FASTSAT.

The FASTSAT mission has continued to operate as planned with the five other scientific experiments operating nominally.

"We knew that the door opened and it was possible that NanoSail-D could eject on its own," said Mark Boudreaux, FASTSAT project manager at the Marshall Center. "What a pleasant surprise this morning when our flight operations team confirmed that NanoSail-D is now a free flyer."

If the deployment is successful, NanoSail-D will stay in low-Earth orbit between 70 and 120 days, depending on atmospheric conditions. NanoSail-D is designed to demonstrate deployment of a compact solar sail boom system that could lead to further development of this alternative solar sail propulsion technology and FASTSAT's ability to eject a nano-satellite from a micro-satellite - while avoiding re-contact with the FASTSAT satellite bus.

Follow the NanoSail-D mission operation on Twitter at:
http://twitter.com/nanosaild

For additional information on the timeline of the NanoSail-D deployment visit:
http://www.nasa.gov/pdf/501204main_NSD2_timeline_sequence.pdf

To learn more about FASTSAT and the NanoSail-D missions visit:
http://www.nasa.gov/mission_pages/smallsats

NanoSail-D is predicted to be visible once the sail is unfurled. The site at http://www.heavens-above.com has a link for the predicted viewing times and sky coordinates to find NanoSail-D at your location.

[ANS thanks Dave Taylor, W8AAS and the NASA Marshall Space Flight Center for the above information]

/EX

SB SAT @ AMSAT $ANS-023.04
Marshall Amateur Radio Club Confirms NanoSail-D Beacon Active

AMSAT News Service Bulletin 023.04
>From AMSAT HQ SILVER SPRING, MD.
January 23, 2011
To All RADIO AMATEURS
BID: $ANS-023.04

The Marshall Amateur Radio Club, WA4NZD late Wednesday afternoon, January 19, 2011, confirmed ejection of the NanoSail-D sub-satellite. This loaf-of-bread sized spacecraft was carried to orbit late last year on an Air Force rocket as part of NASA's FastSat project. This is the first successful deployment of a satellite, launched from a satellite already in orbit! The only communication from the NanoSail-D vehicle is via ham radio with 1200 baud FM AX25 beacon packets.

The WA4NZD team of N4PMF and WB5RMG, was listening on 437.275 MHz FM with the NanoSail-D Principal Investigator Dean Alhorn at the club station when the beacon was heard and susbequently decoded onto the screen. Please visit http://wa4nzd.wordpress.com for pictures and more links to the NanoSail-D project. They are asking for telemetry reception reports from all over the world to help fill in gaps. The battery is expected to last for only three days.

The NanoSail-D mission page contains the latest tracking data and a link to report received packet telemetry data:
http://nanosaild.engr.scu.edu/dashboard.htm

Details on the format of the packet data downlink are presented in a PDF document at: http://tinyurl.com/6497q84 (scu.edu).

An example of received packets from NanoSail-D:
Fm KE7EGC To UNDEF Via TELEM <UI pid[illegible] Lend >[22:55:45]
NanoSailD.org 8C0F0000A21400000004008A890200004939C37ACFC0000000

UniverseToday.com also carried a story: http://tinyurl.com/4etefaa
In another story on UniverseToday the NanoSail-D data capture video by Henk, PA3GUO is featured at:
http://www.universetoday.com/82733/success-nanosail-d-deploys/

John, VE8EV wrote from Inuvik, Canada to provide a link describing his successful telemetry capture to confirm the deployment of the NanoSail-D solar sail:
http://ve8ev.blogspot.com/2011/01/nanosat-d-sailing-new-sea.html
This page describes a novel approach to decoding telemetry by using an Excel spreadsheet.

AMSAT's Keeper of the Keps, Ray Hoad, WA5QGD says the KEPs for NANOSAIL-D are now being updated with the label NANOSALD.

[ANS thanks Alan Sieg, WB5RMG and the Marshall Amateur Radio Club, WA4NZD; John, VE8EV, and UniverseToday.com for the above information]

/EX

SB SAT @ AMSAT $ANS-023.05
January AMSAT India Newsletter - CubeSat Transponder Announced

AMSAT News Service Bulletin 023.05
>From AMSAT HQ SILVER SPRING, MD.
January 23, 2011

To All RADIO AMATEURS
BID: $ANS-023.05

This week AMSAT India Secretary Nitin, VU3TYG announced that the AMSAT India January 2011 news letter is available for download. The PDF of the newsletter is at:
http://amsatindia.org/Newsletter/AMSATINDIA-News-January2011.pdf

This month's newsletter includes an announcement by AMSAT India Technical Director Pop, VU2POP, regarding the latest developments with their CubeSat transponder. Pop wrote, "I have immense pleasure in announcing that the initial design of the transponder has been completed and the components have been procured."

Features of the AMSAT India CubeSat transponder include:

+ 435.250 MHz uplink and downlink, half-duplex UHF narrow-band FM transceiver.
+ FSK/MSK baseband for 1200-9600 baud operation.
+ Supports AX.25 or user-defined frame formats supported
+ Transmitter output power 1 Watt
+ Super heterodyne receiver with Packet reception sensitivity to -120 dBm at 1200 bps
+ On-board measurement of TXO and PA temperatures, battery voltage, and RSSI and RF-error on receiver
+ Downlink of configurable content (text and measurements)
+ Autonomous audio Morse beacon when idle
+ Compatible with the Cube sat Kit "PC104" form factor with the first set of PCBs ordered for the engineering model

Pop concluded, "Thanks to my team for their great focus in spite of their busy schedule and Ganesan (KJ6LRR) for his efforts in this baby step which we have taken in this domain. Look out for more updates in our future News letters."

The full list of specifications and an engineering CAD drawing of the CubeSat transponder PCB can be found in the AMSAT India January newsletter link. The newsletter archives can be obtained on-line at:
http://www.amsatindia.org/Newsletter

[ANS thanks AMSAT India for the above information]

/EX

SB SAT @ AMSAT $ANS-023.06
ESA Astronaut Paolo Nespoli Speaks with Italian Youth via ARISS

AMSAT News Service Bulletin 023.06
>From AMSAT HQ SILVER SPRING, MD.
January 23, 2011
To All RADIO AMATEURS
BID: $ANS-023.06

On Saturday, January 15, students attending the Istituto Comprensivo Via Toscana 2 in Civitavecchia, Italy took part in an Amateur Radio on the International Space Station (ARISS) contact with ESA astronaut Paolo Nespoli, IZ[illegible]JPA.

Nespoli answered 12 questions during the first ISS pass. On the following pass, he completed the students' questions and exchanged greetings with Italian Space Agency President Enrico Saggese. Nespoli also talked about the importance of school contacts as well as the 10th anniversary of ARISS contacts in both Italian and English. The

event was attended by 300 people and was covered by national tele-
vision and other media.

[ANS thanks Carol Jackson, KB3LKI and the January 17, 2011 ARISS
 Status Report for the above information]

/EX

SB SAT @ AMSAT $ANS-023.07
Last Call: OSCAR SKN Best Fist Nominations Are Due

AMSAT News Service Bulletin 023.07
>From AMSAT HQ SILVER SPRING, MD.
January 23, 2011
To All RADIO AMATEURS
BID: $ANS-023.07

Ray, W2RS thanks all who participated in AMSAT's Straight Key Night
on OSCAR 2011. Please remember to nominate someone you worked for
'Best Fist.' Your nominee need not have the best fist of those you
heard, just of those you worked. Nominations should be sent to
w2rs@amsat.org. A list of those nominated will be published in ANS
in early February, and in a forthcoming issue of The AMSAT Journal.

[ANS thanks Ray, W2RS for the above information]

/EX

SB SAT @ AMSAT $ANS-023.08
Satellite Shorts From All Over

AMSAT News Service Bulletin 023.08
>From AMSAT HQ SILVER SPRING, MD.
January 23, 2011
To All RADIO AMATEURS
BID: $ANS-023.08

+ Congratulations to Tom, KA6SIP for earning ARRL VUCC #208, and
  to Jim, K0BAM for earning ARRL VUCC #209.

+ The February Scientific American magazine has an article about
  Cubesats entitled "Citizen Satellites" on pages 48-53 by Alex
  Soojung-Kim Pang and Bob Twiggs. Many of you know Bob Twiggs as
  KE6QMD, a long-time AMSAT supporter who is widely known as having
  been "father" of the Cubesat concept when he was at Stanford Uni-
  versity. Bob is now a Professor at Moorehead State Univ in Kentucky.

+ AMSAT Manger, Martha says you can own a piece of AMSAT history. She
  has the following software available for a minimum donation of $5.00:
   <> Atari W3IWI (1985) 5 1/4 disk
   <> AMSAT AMS-81 (1986) for Sinclair computers - Cassette
   <> W3IWI Basic Orbits for I-99 (1985) - Cassette
   <> UoSat 1 & 2 Telemetry Capture Editing and Decoding program
      for IBM - 5 1/4 disk
   <> W3IWI Orbit Prediction Program for TRS-80 Color Computer -
Cassette
   <> AMSAT 2064 Tracking Program (1984) - Cassette
   <> ORBITS II for IBM (1993) - 3 1/2 disk
   <> N4HY QuikTrak for IBM - 3 1/2 disk

  If you are interested send your order to:
  AMSAT, 850 Sligo Ave, #600, Silver Spring MD 20910

+ AMSAT-UK has introduced a new online shop for satellite ground
  station hardware and software: http://tinyurl.com/AMSAT-UK-Shop

+ The AMSAT-UK FUNcube Amateur Radio satellite project is now on
  Facebook and Twitter. Go to http://www.facebook.com just lookup
  FUNcube. Twitter: http://www.twitter.com/FUNcubeUK You can join
  the FUNcube Yahoo Group at: http://groups.yahoo.com/group/FUNcube/
  FUNcube website: http://www.FUNcube.org.uk/
  FUNcube SDR Dongle: http://www.FUNcubeDongle.com/

+ Print Your 10th Anniversary International Space Station Calendar:
  NASA's International Space Station calendar is now available in both

  large and small file sizes to print at home, or with the help of a
  professional printer. To print it out on your home printer, download
  the 6.8 Mb file. To print it out in full resolution, take the link
  to the 74 Mb file to your preferred printer and specify the paper
  quality and printing instructions. The link to these files is on
  NASA's web at:
  http://www.nasa.gov/mission_pages/station/main/index.html

+ For hams who experiment with space communications the latest VK3UM
  EME Calculator update (Ver 7.08) is now available. Download direct
  from http://www.vk3um.com

+ Space Adventures expects to resume tourist visits to the space sta-
  tion starting in 2013. The company does not discuss costs, but a seat
  on a Soyuz is believed to run between $30 million and $40 million.
  Full story at: http://spaceflightnow.com/news/n1101/12soyuz/

+ Science in the shack! Participate in real space research from your
  shack. The January 10, 2011 edition of the One Minute Astronomer
  describes an astronomy project which may be of interest to many
  scientifically oriented amateur radio operators. You are invited to
  become a Planet Hunter to aid in the search for exoplanets:
  http://www.oneminuteastronomer.com/2011/01/10/planet-hunter/
  Additionally, the http://www.zooniverse.org/ site has several other
  opportunities for amateur scientists to participate in research.

+ Tom, K8CX, has posted his collection of DX Sound Bites at:
  http://hamgallery.com/dx2010

+ To celebrate the January 3, 2011 7th Anniversary on Mars for the
  Spirit and Opportunity rovers Glen Nagle created a downloadable
  poster. The poster includes scenes from both Spirit's and Oppor-
  tunity's adventures. Download your copy from:
  http://tinyurl.com/2aua69c (UniverseToday.com)

+ The latest information, photos, and videos of Vietnam's planned
  F-1 Cubesat are posted on-line at:
  http://www.facebook.com/group.php?gid6436068290

+ John, VE3YUL reports that UO-11 was heard in darkness with a strong
  signal received on his handheld radio at 21:12 local on January 20,
  2011 on the 145.825 MHz downlink.

[ANS thanks everyone for the above information]

/EX

SB SAT @ AMSAT $ANS-023.09
Next Winners From PayPal Widget Announced

AMSAT News Service Bulletin 023.09
>From AMSAT HQ SILVER SPRING, MD.
January 23, 2011
To All RADIO AMATEURS
BID: $ANS-023.09

AMSAT-NA VP Operations, Drew KO4MA said this week, "We've randomly selected the next group of prize winners from those that have donated via the Paypal widget. For every $250 dollars raised we randomly pick a donor to receive a prize from the AMSAT prize closet:

$1750-$2000	Robert Benton	W7VB
$2000-$2250	Kevin Schuchmann	WA6FWF
$2250-$2500	Nigel Gunn	W8IFF

Thank you to all that have donated to pay for the construction of ARISSat-1 and the beginning of the AMSAT-Fox project. ARISSat-1 is featured in this month's QST, and AMSAT-Fox is described by the VP Engineering in the current issue of the AMSAT Journal."

If you have an amateur radio website or blog, you too can help AMSAT raise the money required to pay for construction of these two satellites by adding the widget code to your site. You can even add it to your QRZ.com entry. Contact Drew at KO4MA@amsat.org for details. You can see the widget at http://www.amsat.org.

[ANS thanks Drew, KO4MA for the above information]

/EX

SB SAT @ AMSAT $ANS-023.10
HI0RCD Special Events Station Plans AO-51 Operation

AMSAT News Service Bulletin 023.10
>From AMSAT HQ SILVER SPRING, MD.
January 23, 2011
To All RADIO AMATEURS
BID: $ANS-023.10

The Radio Club Dominicano invites satellite operators to look for their special event station HI0RCD via AO-51 as they commemorate "The Month of the Patria" beginning on January 26, 2011 and ending on February 27, 2011 at 23:59 UTC.

January 26 marks the birthday of Juan Pablo Duarte, the Father of the Patria. February 27 marks the 167th anniversary of Dominican independence.

A special QSL card will be available via the bureau. In addition to the planned AO-51 operation HI0RCD plans to also operate on 160, 80, 40, 20, 17, 15, and 10 meters using SSB, CW, and digital modes.

Luis, HI8LAM has also posted information of the special event station on his blog at: http://www.hi8lam.blogspot.com/

[ANS thanks Luis, HI8LAM for the above information]

/EX

AMSAT News Service Bulletin - 023.11
Donation to AMSAT via Required Minimum Distribution Option

AMSAT News Service Bulletin 023.11
>From AMSAT HQ SILVER SPRING, MD.
January 23, 2011
To All RADIO AMATEURS
AMSAT News Service Bulletin 023.11

[Editor Note: This bulletin header has been modified so that its content will not be automatically forwarded via packet bulletins. It contains a fundraising message which may not be allowed in some jurisdictions and discusses income tax provisions applicable to the United States. This message will appear in the e-mail release of the ANS-023 bulletins only.]

We're all getting older and many of us have reached the age of 70-1/2 when of us U.S. taxpayers must begin withdrawing funds from our IRAs. It's called Required Minimum Distribution (RMD). Of course, the amount withdrawn is counted as income and hence U.S. income Tax is due on that amount plus whatever other income the person has.

In the past several years, there has been a provision in the IRS Tax Code which allowed U.S. taxpayers to contribute a portion of the RMD to a charity and NOT have that portion be counted as taxable income.

That provision was due to expire for Tax Year 2010 but at the last minute, the new tax legislation passed by Congress and signed by the President included a provision reinstating it.

Normally, such charitable donations had to be made from the institution holding the IRA funds to the charity without passing through the hands of the RMD recipient. But, since the new tax legislation was not signed into law until December 17th, a special provision was included for the 2010 Tax Year only, allowing these contributions to be made directly by the person receiving them to the charity as long as they are made by January 31, 2011.

Thus, according to this provision, those of us who have already received RMDs for 2010 have until that end of this month to make much needed contributions to AMSAT and NOT have that amount counted as income in calculating the federal income tax due for the 2010 Tax Year.

Note that AMSAT is NOT a tax consultant and is NOT empowered to furnish tax advice. The information presented here was obtained from news releases from several other reliable charities and is, to the best of our knowledge, reliable. Nevertheless, it is always best to consult your own tax advisor.

[ANS thanks the AMSAT Board of Directors for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office. And with that please keep in mind, the ham who decided to take up outdoor activities for the new year. He started by trying to play catch and wondered why the baseball was getting bigger ... then it hit him. Next he tried throwing a boomerang. He couldn't quite remember how it worked, but then it came back to him. Next up was hurdle jumping but he always had a fear of hurdles, but got over it. Finally, he tried rowing but being an indecisive person he couldn't choose either oar.

73,

This week's ANS Editor,
JoAnne Maenpaa, K9JKM